City of St. Petersburg, Florida

BUSINESS DEVELOPMENT

REAL ESTATE

SOCIOECONOMICS

RACE & ETHNICITY

USHSP

REVENUE GENERATORS

POPULATION

QUALITY OF LIFE

Beyond Traffic:

The Smart City Challenge

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1. St. Petersburg Smart City Project Vision

City Vision

The vision for the City of St. Petersburg, Florida is to be a City of opportunity to live, work and play. We will be an innovative, creative and competitive community that honors our past while pursuing our future. All of our citizens, neighborhoods and businesses collaborate in our development, and we will maintain our unique sense of place and economic vitality while preserving our history, diversity, and lush natural beauty. St. Petersburg will be a safe, clean sustainable environment with a spectacular waterfront to be enjoyed by all of its residents and visitors.

This Smart City Challenge grant funding will accelerate our efforts to make our vision for St. Petersburg a reality. We know that improving on how people travel, and how efficiently they travel can positively affect the quality of life in our community. Transportation systems provide connections between places where people live and places where people want to go, including jobs, school, shopping, recreational activities, community services, and entertainment. These systems often include a network of roads, sidewalks, trails, bike lanes, passenger rail, and bus service to accommodate a variety of travel preferences. The City realizes that transportation networks help to support the location, type, and potential for redevelopment. Improving our transportation systems will help our City realize its vision through four strategic pathways: 1) Stewardship and Fiscal Responsibility; 2) Innovation; 3) Impactful Service; and 4) Community Engagement.

The City is dedicated to working with residents, businesses and community leaders to transform our vision of a smart transportation network into reality. We are already hard at work, matching resources and policies to priorities, setting the stage for St. Petersburg's transformative change. Through the leadership of Mayor Kriseman, the City has demonstrated its ability to forge through complicated issues and make actionable progress to enhance the quality of life for those in the Sunshine City.

Our Smart City project is centered on the development of the South St. Petersburg

[Community Redevelopment Area](#) (CRA) which was developed in partnership with Pinellas County. Through our joint planning efforts, we have developed a 7.4-square-mile CRA that encompasses approximately 20 neighborhood and business associations, along with Childs Park and most of Midtown. About 34,000 people live in the CRA, nearly one-third of who have incomes below the federal poverty line. Unlike most CRAs, where money is used primarily for traditional public infrastructure including roads, water systems, parks and buildings, the City has structured it in an innovative way such that the South St. Petersburg CRA would also pay for job training and job creation programs, business loans and grants, and affordable housing development, too.

The CRA plan will continue to revitalize the age-worn business corridors, but it puts an emphasis on mentoring and financial assistance for small businesses, grants and loans to developers to help build affordable housing, and programs to train local residents for better-paying jobs providing much-needed Ladders of Opportunity. We also approved a redevelopment and taxing district (TIF) for the CRA which is expected to generate $66 million over 30 years, based on an average tax growth of 2 percent a year.

The timeliness of the Smart City Challenge could not be more ideal for St. Petersburg to be selected to implement its vision and to be held up as a model for other mid-sized cities across the nation. Our recent [State of the City](#) and [State of the Economy](#) presentations demonstrate that the City is poised to move forward to implement the project components included in our Smart City vision.

City Challenges
While Downtown St. Petersburg, the City's Central Business District and several adjacent business districts have thrived toward providing a fair measure of urban mobility, a significant portion of the City's population resides in suburban areas. In these suburban areas, there is a distinct lack of transit options, and no premium transit that would provide an incentive for residents and visitors to minimize their reliance on cars. In turn, the average household owns 1.59 cars and travels an average of 18,345 miles per year, with average annual transportation costs of approximately $10,131, representing approximately 24% of household budgets. The lack of transportation alternatives, coupled with the fact that St. Petersburg suffers from a high poverty rate (17.2%), higher than both the state (16.7%) and national averages (15.6%), makes it tremendously challenging for a significant portion of the population to achieve financial success. This is particularly true in the newly adopted South St. Petersburg Community Redevelopment Area (CRA) where the poverty rate is 32%, nearly twice the City rate and more than double the national rate. Per Capita Income ($15,630) and Median Household Income ($25,215) are also dramatically lower in the CRA. These challenges make it very difficult for South St. Petersburg residents to own and maintain a car which, in turn, disadvantages them from moving up the Ladders of Opportunity to secure a higher wage paying job or being able to commute to a college, university or other job training programs to improve works skills.

Pinellas Suncoast Transit Authority (PSTA), which provides public transportation services to the City of St. Petersburg reports that the demand for public transportation has been growing faster than the available funding. Between 2007 and 2013, PSTA ridership climbed 23% despite service reductions and fare increases needed to offset more than $40 million in budget cuts. Many of PSTA's 40 routes experience standing room only at some point throughout the day. People are requesting faster service, longer service hours, and more weekend and regional service. As a result of community feedback the "Greenlight Pinellas Plan" was developed and brought to referendum in 2014. Developed as a partnership with the public, the Greenlight Pinellas Plan included bus, passenger rail, regional connections, community access, and transit supportive development concepts. It was designed to meet the transportation needs of the community and to contribute positively toward Pinellas County's future growth by helping to attract and create new jobs and by creating more vibrant, sustainable communities where people can walk, bike, or take transit to a variety of destinations. The Greenlight Pinellas Plan matched travel needs to transit service enhancements by providing faster buses, more evening and weekend service, trolleys, flexible connector routes, commuter service, community circulators, and passenger rail. To achieve the benefits of the Greenlight Pinellas Plan, the Pinellas Suncoast Transit Authority (PSTA) needed additional funding and identified a 1 percent sales tax for transportation as the most viable source. In November 2014, voters did not approve the 1 percent sale tax and transportation network improvements evaporated; the plan was solid though the majority of the voters countywide did not favor an increase in taxes that would be required to implement the plan. It is important to note that within St. Petersburg, referendum results showed significant support for the plan. Unfortunately, Florida state law only allows surtax to be collected at the County level, and the northern area of Pinellas County,

which is extremely suburban with minimal density failed to support the Plan. As a result of the failed referendum, PSTA expects to cut services by 18 – 28 percent in the future. The City recognizes the importance of having a well-connected transportation network, accessible to all, and has made it a priority to explore, identify and execute opportunities to improve transportation options for our residents. That is why it is so important that we secure Smart City Challenge grant funds to continue transportation enhancements that will improve the quality of life for all our residents and visitors.

Both inside and outside the South St. Petersburg CRA, significant remaining

challenges exist to accommodate the planned future transportation demand within existing rights-of-way in the City. Opportunities to expand the right-of-way are tremendously limited due not only to cost, but also simply related to the peninsular geography of St. Petersburg. To encourage more density and allow for better, more resilient movement of people and goods in the future, St. Petersburg will need to look beyond our traditional street grid to provide mobility options; it will be critical for St. Petersburg to look skyward and utilize the airspace above existing rights-of-way.

Another critical challenge for the City is the need to address concerns related to sustainability. The City endeavors to preserve its environment and ensure that the quality of life for our residents and visitors is not diminished over time as the climate changes. The City of St. Petersburg continues to be an environmental leader in Florida, and its long-standing organizational commitment to sustainable practices explains why it was the first community in the state designated as a "Green City" by the Florida Green Building Coalition. It was reinforced when Mayor Kriseman signed an Executive Order to move the City toward membership as a Star Community to establish goals and metrics needed to ensure continued progress.

Project Vision

St. Petersburg's vision for a Smart City is a multi-faceted approach to move Beyond Traffic and provide solutions that: help our residents and visitors move better, move goods better, and move St. Petersburg toward a City that makes efficient use of well-connected transportation systems and other public works infrastructure. There are four key components to our Smart City proposal that are intended to be integrated for holistic improvement of the City's transportation network. They include:

Aerial Cable Propelled Transit (CPT)

The centerpiece of the City's Smart City vision is to move people and goods better is the design and construction of an Aerial Cable Propelled Transit (CPT) system. The CPT, or gondolas, utilize Tricable Detachable Grip (3S/TDG) technology. The gondolas would operate above traditional vehicular traffic in their own exclusive rights-of-way (ROW) above established ROW corridors to connect St. Petersburg's Central Business District in Downtown with the remaining business districts that generally lie near the city's boundaries. See section 4 for a map of our proposed preliminary route.


Research has indicated that the CPT provides solutions to address many of the City's challenges and does so in a manner that is in keeping with the overall vision for St.

Petersburg. It provides mobility options that are desirable for all residents and visitors with improved access to and along commercial corridors. It provides individualized trips with wait-times, often less than one minute, which are far more attractive than traditional transit with overall travel speeds that are comparable to traditional transit, and it allows for a minimal surface footprint which, in turn, retains existing valuable land to continue growth in land-locked St. Petersburg in Florida's most-densely populated county, Pinellas County.

CPT systems have been successfully launched in Europe and South America as urban transit forms. Advancements in its technology have been achieved toward providing attractive, productive, safe and efficient transportation mode. The St. Petersburg CPT system would be integrated into a holistic transportation network that supports additional Smart City solutions. Gondola cabins are anticipated to be Wi-Fi enabled and equipped with connected vehicle technologies that communicate with the overall ITS architecture within the city. Furthermore, the gondola cars could be equipped with solar panels which could be harnessed to reduce St. Petersburg's reliance on fossil fuels. Finally, the City would explore the opportunity to add communications technology to the CPT to provide additional ITS connectivity.

Parking and Event Management System in Downtown using connected vehicle information, DMS signage, CCTV cameras and in-vehicle information systems

St. Petersburg recently completed a major Downtown Parking Demand and Adequacy Study that included the adjacent Edge District. St. Petersburg is poised to have an increase in population in the Downtown District with approximately 2,300 additional residences permitted or under construction at this time. To accommodate this growth, and provide easy access for residents outside of Downtown and other visitors, it is critical that the City pursue smart communications that can guide motorists to available parking and Downtown destinations. The ITS infrastructure includes CCTV sensors and cameras, along with dynamic message signs that have been programmed for construction beginning in FY18 using both County and State funds. This effort could be enhanced with Smart City funding, through the addition of technology added at the city's municipal parking structures to provide additional information to motorists. The City would explore the
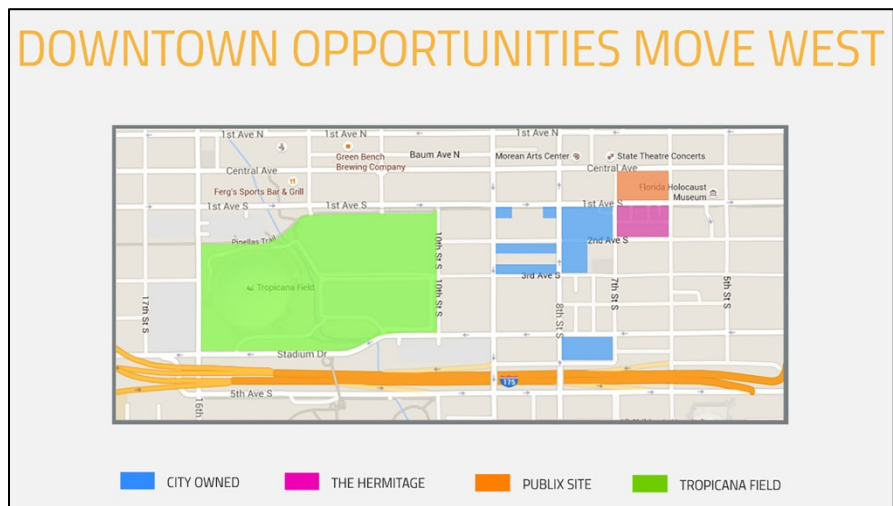
opportunity to deliver this information not only through the dynamic message signs but also through mobile applications and connected vehicle technologies.

Citywide "Wi-Fi" grid and all-new LED technology replacement

St. Petersburg is actively pursuing both the installation of City-wide WiFi service as well as the conversion of the existing street lighting network from high-pressure sodium lights to LED for improved energy efficiency and light quality. One project component of St. Petersburg's Smart City vision would be to install communications technology on existing street light poles, which would form a connected, communications grid across St. Petersburg. The communications technology would have the capacity to be responsive to the transportations demands (light intensity adaptability), could communicate critical infrastructure information to the City's traffic control center and other data collection sites, and finally, be equipped to provide city residents and visitors with "wi-fi" access. Providing internet access at low or no cost, particularly in the South St. Petersburg CRA, has the potential to improve the economic quality of life for our residents.

With smart, LED technology that's responsive to the transportation demands, the City would benefit from more efficient use of electricity and more timely and strategic maintenance operations. It could also improve safety for pedestrians by increasing the light intensity when pedestrians are detected in the area. St. Petersburg, and its Metropolitan Statistical Area, have a history of significant pedestrian crashes, and implementation of the smart grid could help to reverse that trend.

### Automated, On-Demand Low-Speed Vehicles/Smart Cars

St. Petersburg's Smart City vision includes a fleet of automated low speed vehicles (LSV) to enhance the connectivity of the existing transportation system. The LSV would be available on-demand within a service area, originally the greater Downtown Core, to assist with "last mile" transit connectivity to other transit options and/or destinations. The LSV would have the capability to travel at lower speeds (10-15mph) which is intended to preserve safety in pedestrian-rich environments, while connecting users to the CPT and additional premium transit such as BRT, local bus service and bike share. The City would work to establish partnerships to develop the technology associated with this component of the St. Petersburg's Smart City Vision.

Implementation and Operation Approach of the Demonstration Project

The City envisions that the components contained within the project vision would be implemented in phases, beginning with the premium aerial CPT transit to provide enhanced mobility between St. Petersburg's business districts which are generally located on the edges of the City's boundary. Following the successful implementation of the CPT, the City would endeavor to implement the remainder of the project components, beginning with the implementation of infrastructure associated with Parking and Event Management to leverage the upcoming funds programmed in FY18. The City's addition of technology to produce a citywide "Wi-Fi" would follow and be integrated with the elements of the first two

components. While the first three phases are being implemented, the City would work to establish partnerships necessary to begin moving toward the final component that includes automated, on-demand low-speed vehicles/smart cars.
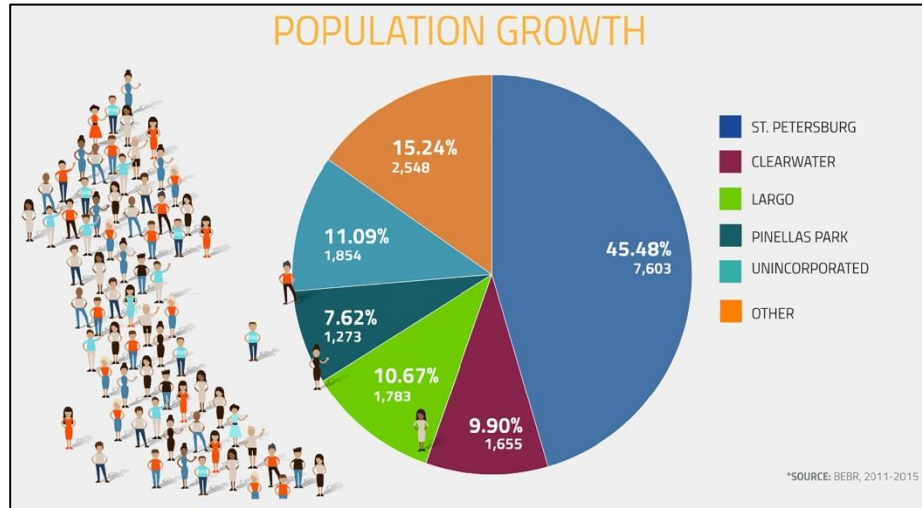
Phase 1	Phase 2	Phase 3	Phase 4
• CPT	• Parking & Event Management System	• Citywide "Wi-Fi" grid	• Automated, On-Demand LSV
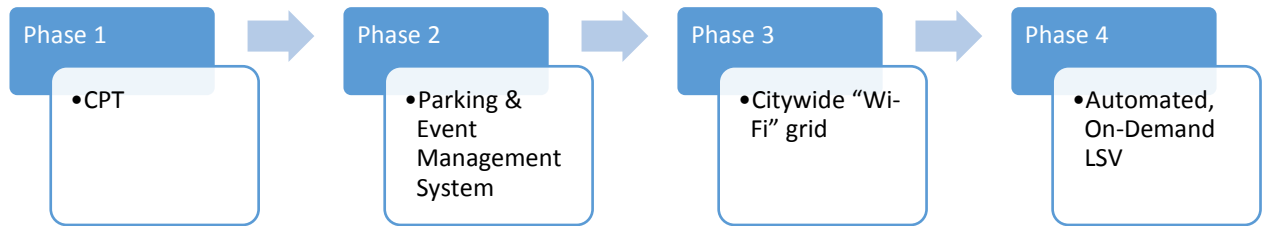
Program Management

The City of St. Petersburg's Transportation and Parking Management Department will administer the USDOT Smart City Challenge grant, with collaboration from all city departments necessary to ensure that implementation of the project components is fully integrated and aligned with all city initiatives. The City envisions partnering with Echelon LLC which is further described in Section 7 to develop the CPT components of the project. The City's Transportation and Parking Management Department will lead the city's partnership with Pinellas County and the Florida Department of Transportation on the implementation of the Parking Management and Event Management improvements as well as the street-lighting wi-fi grid inclusion. For the automated on-demand low speed vehicle component, the City's Transportation and Parking Management Department envisions developing a new partnership with local research institutions for technical assistance and data collection for all components of the Smart City Challenge. Furthermore, the City will collaborate with PSTA and the Pinellas County MPO/PPC on all components to ensure that implementation is fully aligned with County and Regional land use and transportation plans.

2. St Petersburg Project Demographics

The City of St. Petersburg is located in Pinellas County, at the approximate midpoint of the west coast of Florida. Bordered on three sides by water, the 288 miles of shoreline are St. Petersburg's most valuable and attractive natural features and have historically fostered St. Petersburg's image as a resort community. The City is also the gateway to the Florida high tech corridor, which is the fifth largest high tech labor force in the United States. Sixty percent of Florida's high tech companies are located in St. Petersburg and Tampa Bay, as are one third of the state's manufacturing companies. The ten marine institutes clustered around the University of South Florida's Marine Science Department in downtown St. Petersburg forge the largest and most prestigious oceanographic research center in the Southeast.

It is exactly the above environment that helped to place this area as one of the fastest growing markets where people wanted to work and live in the United States. According to U.S. Census information, in 2010 the City's population was 244,769 persons,

POPULATION GROWTH

- ST. PETERSBURG — 45.48% 7,603
- CLEARWATER — 9.90% 1,655
- LARGO — 10.67% 1,783
- PINELLAS PARK — 7.62% 1,273
- UNINCORPORATED — 11.09% 1,854
- OTHER — 15.24% 2,548

*SOURCE: BEBR, 2011-2015

and represents the fifth largest population in Florida. The City has a population density of 1.89 people per square mile, making up over just ten percent of the 2010 Urban Area population. The median age of the population was 39.3 years while 68.65 percent or 168,036 of the population being white. The largest minority was Black or African American with a population of 23.9 percent or 58,577, followed by Hispanics with a population of 16,214 or 6.6 percent, Asians at 3.2 percent or 7,779, and those categorized as other races at 1.4 percent or 3,474. The City had a homeownership rate of 64 percent and rental rate of 36 percent at the time of the conduct of the American Community Survey (ACS). The median value of all single-family owner-occupied homes with a mortgage according to the ACS was $191,100.

3. St. Petersburg Project Alignment with Smart City Characteristics

The City of St. Petersburg is dedicated to identifying and implementing holistic, integrated approaches to improve transportation performance within our City. The City embodies the Smart City characteristics as described below.

Existing Public Transportation

As previous mentioned, PSTA is the public transit provider for the City and Pinellas County, running nearly 40 bus and trolley routes with a fleet of 210 vehicles which are all wheelchair accessible. During FY2015 PSTA recorded a total ridership of 14.9 million, equivalent to 45,126 daily riders, and an operating budget of $66.66 million dollars.

Of PSTA's 40 routes, 29 routes serve part or all of St. Petersburg. These include high frequency, express, trolley, circulator, and local routes. Routes that utilize St. Petersburg as only a starting or ending location tend to have headways ranging from 30 to 60 minutes. Routes that stay within the City enjoy headways of approximately 20 minutes. Some of PSTA's strongest ridership numbers are the routes that are located primarily within the City of St. Petersburg including Routes 4, 19, and the Central Avenue Trolley. In all, 38% of PSTA's route miles are within St. Petersburg.

The City is currently working with PSTA to review their existing services as a result of the 2013 Community Bus Plan. In February 2016, downtown St. Petersburg will see its first major change in service, as PSTA transitions from a traditional spoke and hub system to a distributed grid. While the transit service will be dispersed, providing service to streets that were previously unserved, system headways are anticipated to remain similar to the existing schedules. The system re-design is planned to be cost-neutral.

St. Petersburg is excited by the partnership opportunities with the PSTA for future premium transit. The City has submitted a letter of support to PSTA for inclusion in their grant application for FTA funds for the Central Avenue Corridor Bus Rapid Transit (BRT) service. The BRT project, located primarily within St. Petersburg, is along Pinellas County's busiest transit corridor, and will be a tremendous boost to St. Petersburg's economy, industry, and quality of life while also serving as a vision of what premium transit service could be throughout our region. The Central Avenue corridor links many of our strong, traditional neighborhoods with several key commercial districts, our world-famous beach communities, and our Downtown core. Accordingly, the City of St. Petersburg remains steadfast in our dedication to the continued investment along the corridor as it is a primary urban redevelopment focus area that spans the entire width of St. Petersburg. Its success will be vital to our sustained growth for St. Petersburg.

Environment That Is Conducive To Demonstrating Proposed Strategies

St. Petersburg residents and the City Administration are ready and willing to undertake a Smart City demonstration project. The City has a demonstrated history of commitment to advancing transportation through the use of partnerships, innovation and data. The following initiatives highlight the City's commitment to the Smart City concept:

St. Petersburg Comprehensive Plan

The City of St. Petersburg is dedicated to improving the lives of its residents, as reflected in its Comprehensive Plan. A major goal of the Comprehensive Plan is to create well-designed, transit oriented development (TOD) to allow residents, visitors and tourists to travel to a variety of places without using a personal vehicle, to provide direction for developing and redeveloping properties around transit stations in a way that makes it convenient for people to use transit, and to incorporate the land use and economic development criteria outlined in the Federal Transit Administration (FTA) New Starts Planning and Development Process. To plan for and accommodate TOD transit stations that are part of a premium transit system will be established in the Pinellas County Metropolitan Planning Organization's (MPO) Long-Range Transportation Plan. Transit stations will be located along the route (or routes) identified at the conclusion of the Pinellas Alternatives Analysis, with the specific station locations determined through a multi-agency joint planning process as part of the Pinellas Alternatives Analysis and Bay Crossing Alternatives Analysis, and other similar transit planning activities. Several policies were created based on the goal of TOD. Policies the City strives to achieve include:

- The City shall work with Pinellas County, neighboring jurisdictions, FDOT, PSTA and other transportation agencies that recommend transportation improvements in the City to ensure that the improvements further the City's Comprehensive Plan;
- Create walkable, moderate to high density, mixed use developments located within approximately ½ mile of public transit stops or stations to support transit ridership;
- Make pedestrian and other alternative modes of transportation, including, but not limited to, bicycle transportation, bus transit, and rail transit, the focus of the TOD development strategy without excluding automobiles;
- Accommodate local and regional multimodal connections for multiple types of transportation, including, but not limited to, trains, buses, bicycles, cars, ships, boats, aircraft and taxicabs, and alternative modes of transportation;
- Incorporate sustainable technologies, where technologically and economically feasible, in station design and operations, such as in lighting, signage, audio/visual, cooling, waste management and stormwater systems; and
- Develop graphic wayfinding systems within station areas to assist visitors and tourists with navigation.

Vision 2020

In 2002 the City of St. Petersburg embarked on an ambitious plan to guide development and redevelopment for the next several decades. This plan, known as St. Pete Vision 2020, is a community driven, long-range plan for the entire City. The project will be developed by the citizens, guided by the City's Planning Commission, The Council of Neighborhood Associations (CONA), the Chamber of Commerce, the University of South Florida, and City Staff. The Vision 2020 Plan addresses a number of traffic related issues. This includes providing and encouraging mass transit, allowing and encouraging other forms of transportation such as bicycles and maintaining and increasing pedestrian flow opportunities. The Vision 2020 Plan also directs the creation of mixed use, village-type nodes along the corridors to provide convenient opportunities for working, entertainment, dining and retail uses in proximity to surrounding neighborhoods.

Downtown Waterfront Master Plan

The City of St. Petersburg, through the Downtown Waterfront Master Plan that was adopted in 2015, envisions a continued legacy of preserved and enhanced open space that is inclusive and offers opportunities for all. It is our understanding and belief that the unrivaled, vibrant and diverse array of community assets stretching from the Coffee Pot to the Pier, and the Pier to Lassing Park working together, will afford greater economic and ecological

resiliency for future generations. As such our master plan is guided by five overarching community themes: 1) S**tewardship of the Waterfront Environment**: Developing a sustainable relationship between the natural and built environments; 2) **Enhancing the Experience of the Water:** Expanding St. Petersburg as a waterfront destination for boaters and non-boaters; 3) **An Active Waterfront Parks System:** Diversifying the activities of the waterfront to meet a growing community's needs; 4) **Economically Vibrant Downtown Places:** Leveraging the economic potential of in-water and upland areas along the water's edge; and 5) **A Connected, Accessible Downtown and Waterfront**: Creating continuous linkages, service oriented parking and transit, and increased public access to the waterfront.

Continuity of Committed Leadership and Capacity To Carry Out The Demonstration Throughout The Period Of Performance

The City of St. Petersburg's Transportation and Parking Management Department staff is committed to maintaining and improving the transportation system for the safe and efficient movement of people, goods, and services. The Department's clear focus is on traffic, pedestrian, and bicycle safety in partnership with the community as a whole to enhance the quality of life for all our citizens and visitors. Refer to section 7 and 12 to learn about the City's Smart City partners.

St. Petersburg has a strong history of successfully implementing Federal grants, and in keeping with the City's vision, intends to remain good fiscal stewards. In the past ten years, the City has benefitted from the receipt of $183,815,448 in Federal grants, including $44,399,142 in active grant administration. Approximately $46,445,610 in funding has been allocated toward St. Petersburg's transportation network with $39,995,250 aimed at surface transportation and $9,450,610 aimed at port and airport improvements.

CITY ACCOLADES

#2 MOST BEAUTIFUL CITY IN THE USA

#1 BEST CITY FOR MILLENNIAL JOB SEEKERS IN FLORIDA

#12 IN THE NATION FOR SMALL BUSINESS

ONE OF THE MOST "OUTSTANDING PLACES"

#6 MOST UNDERRATED CITY IN THE US

#1 TOWN IN AMERICA FOR CRAFT LOVERS

FLORIDA'S BEST WALKING CITY

A Commitment To Integrating With Sharing Economy

The City of St. Petersburg is committed to promoting and providing transportation networks that improve the sharing economy.

Park Once Shuttle

To address issues identified in the 2015 St. Petersburg's Parking Demand and Adequacy study of traffic congestion on the weekend evenings the City launched the "Park Once Shuttle". The Shuttle is designed to make locating parking easier downtown and including the Central Arts district on Friday and Saturday nights. Two free shuttles will take people to and from some of the City's trendiest destinations from 5pm to midnight. Visitors can park

and ride from five locations in the city. The Park Once shuttle builds on St. Petersburg's popular existing shuttle program, which operates during larger events, such as the Grand Prix, Rays baseball games and large waterfront park events. The shuttle is aimed at helping downtown visitors feel comfortable about parking a little further away and reducing the required walking distance from the City's larger parking garages to their destination. St. Petersburg Smart City vision includes using electric LSVs to replace the diesel-powered Shuttle.

Bicycle Sharing Program

The City of St. Petersburg is planning to roll out a bicycle share program. In 2015, the City was selected under EPA's Building Blocks for Sustainability Grant Program, to receive technical assistance to determine the need and feasibility of a bicycle share program. Through the award, the City engaged the community in a conversation about developing a path that would allow the City to successfully implement an equitable, sustainable bicycle sharing system. The report was finalized in August 2015, and since then, the City has received and evaluated proposals for the implementation of the program. The City is currently in negotiations with the recommended operator and a St. Pete Bike Share program is expected to launch in the fall of 2016. The City anticipates incorporating the most advanced technology into the bike share system which provide information to residents and visitors on bike availability at each location, and provide users the most flexibility when engaging with the system components.

Ferry Service Pilot Project

The City of St. Petersburg has taken the lead to establish a high-speed ferry pilot project to demonstrate the feasibility of water-borne transportation connecting Downtown St. Petersburg to Downtown Tampa. Partnerships with critical agencies including the City of Tampa, Pinellas County, and Hillsborough County have been established with commitments of funding from various sources in equal amounts from all agencies. Opportunities to pursue additional public-private partnerships will be continued prior to the estimated start of service in October 2016. As currently envisioned, service is expected to continue at least through the region's peak visitor season, until April 2017, at docks within St. Petersburg's Vinoy Basin and at Tampa's Convention Center. If the demonstration is shown to be successful, the City would look to partner with the regional agencies to continue and perhaps expand this transportation mode.

Vehicle for Hire Services

The City of St. Petersburg is dedicated to having a robust Vehicle for Hire service with Transportation Network Demand (TND) companies like Uber and Lyft. On July 16, 2015 the City Council Public Service and Infrastructure Subcommittee considered several potential changes to the City's Code pertaining to Vehicles for Hire. The primary discussion points related to regulation of Pedal Buses. At the meeting the committee voted in favor of changes to the code which would allow for less stringent regulation than what had been

promulgated in the past. It had been contemplated to bring all Vehicles for Hire Ordinance amendments, including Transportation Network Companies (TNC's) to Council together. However, due to timing and uncertainty related to TNC regulation at the State level, the Administration sought Council action on an Ordinance that would not affect TNC's but allow other changes to move forward at this time. As a result of the approved ordinance, a bicycle rickshaw company began service in the greater downtown core in the fall of 2015. The City is also expecting a service using Low Speed Vehicles (LSV) to launch in early 2016. The proposed service area for the LSV service includes the greater downtown core extending into the adjacent residential (suburban) areas to eliminate the need to drive into downtown. The City is dedicated to supporting the expansion of LSV, and has partnered with the St. Pete Chamber of Commerce to connect LSV business service owners with local business owners. The meetings were intended to provide the operator with an opportunity to solicit the advertisement deals necessary for the service to begin.

St. Petersburg Enterprise Car Share
In 2013 Pinellas County's first car-sharing service was launched in St. Petersburg. Operated through Enterprise, the service offers an affordable transportation alternative that is available for students, faculty and the general public.

A Clear Commitment To Making Open, Machine-Readable Data Accessible, Discoverable And Usable By The Public to Fuel Entrepreneurship And Innovation
The City of St. Petersburg is dedicated to improving communication and sharing information with our residents. The City has begun investing in mobile applications that allow citizens to connect with the City Government to make our community more efficient and enjoyable.

OpenGov
Spearheaded by Mayor Kriseman, is an effort to continue the City's commitment to "Government in the Sunshine," and to enhance transparency in financial reporting., The City also offers an interactive reporting tool, OpenGov, that allows citizens to explore budget and other financial data online in various graphical formats selected by the user.

Systems Development/GIS
St. Petersburg's Technology Services Department Systems Development/GIS Division provides application support and development for enterprise-wide business systems applications, desktop-based applications, GIS applications, Internet and Intranet systems. GIS offers the ability for anyone to view, create and print maps of St. Petersburg via the Intranet. The goal for the City GIS team is to provide City-wide and public access to the vast amount of GIS data, both graphical and non-graphical, using desktop PC's. Currently, the City offers 11 GIS maps to the public.

Parkmobile App
In 2010, the City of St. Petersburg teamed up with Parkmobile USA to launch the Parkmobile app that allows residents and visitors in St. Petersburg to save time and money by using

their mobile phone to pay for parking. In 2015, the City entered in to a new agreement with Parkmobile to continue providing services to St. Petersburg's residents and visitors.

SeeClickFix

Under the leadership of Mayor Kriseman, the mobile application [SeeClickFix](#) was developed to request assistance with City services or report problems, such as potholes, graffiti, broken sidewalks, storm drain issues, traffic signal/sign problems, special pick-up of dumped items, codes violations, etc. When reports are filed, the Mayor's Action Center acknowledges the newly submitted issues and forwards them to the appropriate City Departments to take care of the requests. Users receive email updates and can return to the application to check the status of submitted issues. When the issue is resolved, the issue can be closed.

St. Pete Collects Mobile

In June 2015, St. Petersburg began curbside recycling. To assist residents keep track of trash and curbside recycling collection schedules, the City developed the mobile app, [St. Pete Collects](#). St. Pete Collects lets customers set custom email or text reminders, receive schedule changes due to holidays or bad weather and report missed collections, container issues or other concerns from their mobile device. Customers can also look up an item to find out if it's recyclable or trash using the Waste Wizard, learn about local mobile collection events, and receive tips for a greener lifestyle.

St. Pete Health Hero

In May 2015, the City of St. Petersburg kicked off its "Healthy St. Pete" City-wide initiative to improve community health. In order to promote healthy lifestyles in the community, the City developed the [St. Pete Health Hero](#) App, which tracks a participant's health and wellness progress. Participants earn rewards for healthy behaviors and group activities. The City frequently adds community challenges where residents can come together and support one another in the collective mission to make St. Pete a healthier place.

St. Pete InnoVision and MySidewalk

[St Pete InnoVision](#) is a new meeting room where residents can share their ideas with the City. The City launched the website to begin envisioning the downtown waterfront as the City embarks on its Downtown Waterfront Master Plan. Following the successful use of St. Pete InnoVision for the Downtown Waterfront Master Plan, St. Petersburg launched [MySidewalk](#), which allows residents to continue to share their ideas with the City. The MySidewalk platform is also used by our regional partners, including Pinellas County, the City of Clearwater, the City of Tampa, and Hillsborough County which allows for a more broad conversation about issues in and around St. Petersburg.

St. Petersburg Smart City Vision Cable Propelled Transit
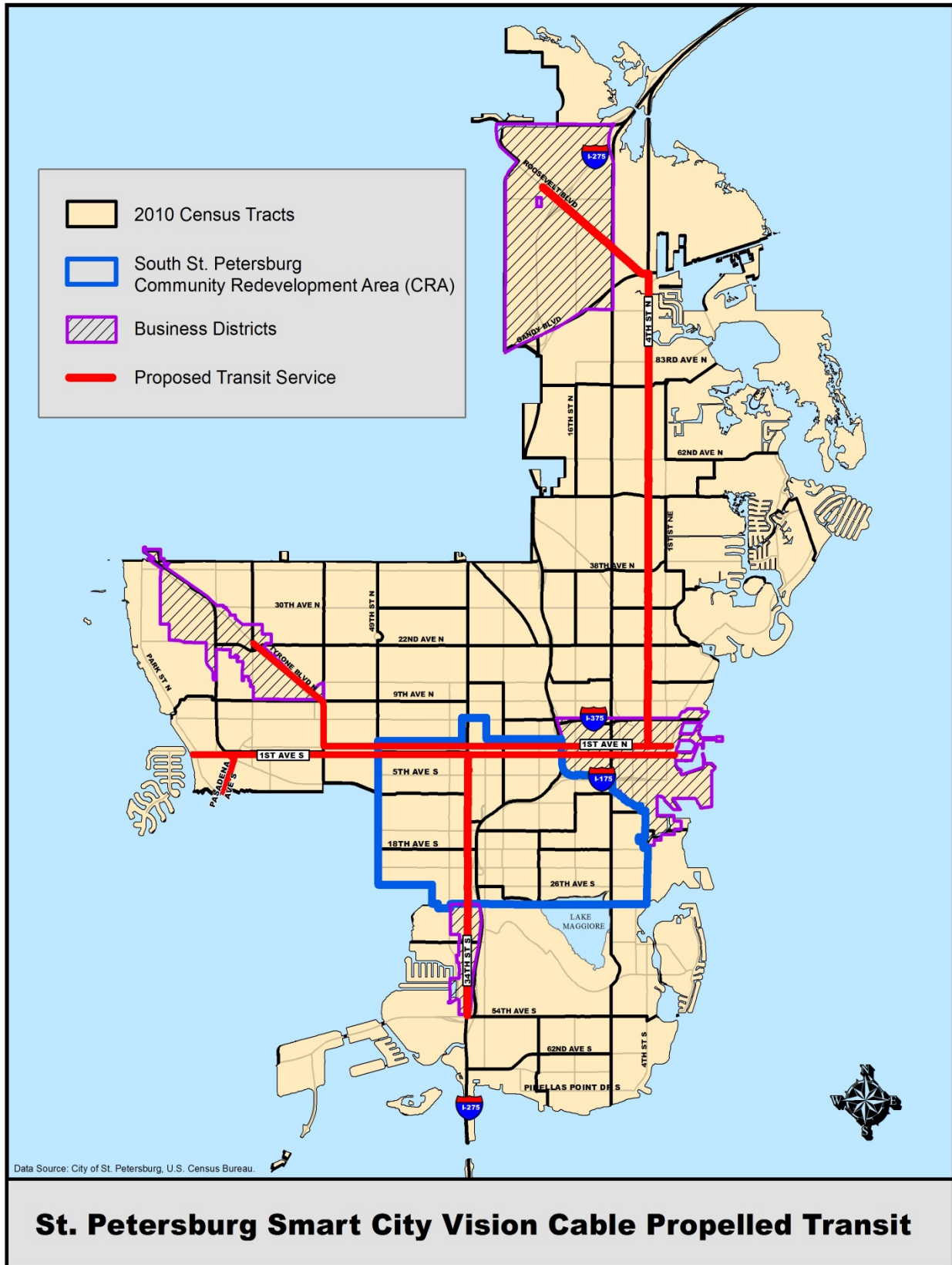
5. St Petersburg Alignment with DOT's Vision Elements

The City of St. Petersburg's project elements will substantially address ten (10) of the Vision Elements desired by USDOT as a part of the Smart City Challenge.

Vision Element #1: Urban Automation

The centerpiece of the City's proposal is the installation of a Cable Propelled Transportation (CPT) system. CPT is an automated system for the movement of and people and small goods. The City's CPT system is envisioned to be developed as an aerial gondola that will provide an alternative transportation mode to the downtown area, providing connectivity to business districts that are near the City's edges. Additionally, the CPT will serve as an economic development tool to attract tourists and residents to the downtown. The CPT will transport people in a most efficient manner because it avoids traffic congestion at ground surface, and the travel pods can reach up to speeds of 1,400 feet per minute, making commutes comparable with ground surface automobile transportation. The City plans to outfit the CPT infrastructure with solar panels to reduce electricity consumption and the CPT infrastructure will be constructed to accommodate communications technology.

St. Petersburg also will pursue funding for automated, on-demand low-speed vehicles or smart cars. Our plan is to provide for personalized urban mobility in LSV that would replace our Park Once shuttle. The LSV's would connect with the CPT and other premium transit. The service is expected to run in the greater Downtown core, where vehicular speeds should remain low to promote safety.

Vision Element #2: Connected Vehicles

St. Petersburg's Smart City vision also includes introducing a Citywide a "Wi-Fi" grid. In addition to providing transformative change by providing free internet access to all areas of the City, Wi-Fi technology will also be used in "connected" infrastructure communications to provide information for additional congestion management. In future phases the City would connect other asset investments with smart infrastructure such as wastewater and stormwater facilities. This project element will greatly improve safety, especially for pedestrians, and allow for more efficient management of the City's infrastructure as a whole.

Vision Element #3: Intelligent, Sensor-Based Infrastructure

The City will support Vision Element #3 through a variety of infrastructure platforms including development of a Parking and Event Management System in the Downtown area using connected vehicle technology, DMS signage, CCTV cameras and in-vehicle information systems. We envision the technology as an outgrowth of the City's Parking Demand Study and the County's ITS program. Intelligent, sensor-based infrastructure will benefit drivers by reducing traffic and pollution related to parking space search time. This component of our vision will leverage the $3.6 million ITS projects planned for FY18 in our downtown.

Vision Element #4: Urban Analytics

The City of St. Petersburg is an active partner in the Tampa Bay Regional ITS Architecture. The ITS Architecture is a roadmap for transportation systems integration in the Tampa Bay Region over the next 20 years. The Statewide and Regional ITS Architectures represent a shared vision of how each agencies' systems will work together in the future, sharing information and resources to provide a safer, more efficient, and more effective transportation system for travelers in the State of Florida.

The City of St. Petersburg's contribution to the Regional ITS Architecture is through the ITS field equipment it operates, such as traffic signals, sensors, and CCTV. The following list the Urban Analytics that St. Petersburg supplies to the regional Architecture:

- Roadway Signal Priority
- Roadway Basic Surveillance
- Roadway Signal Controls
- Roadway Traffic Information Dissemination
- Roadway Data Collection
- Roadway Equipment Coordination
- Roadway Signal Preemption
- Field Management Stations Operation

The Traffic Control Center also receives and transmits information from the following data platforms:

- Roadway information system data (E)
- Signal system configuration (E)
- Signal control plans (E)
- Signal control device configuration (E)
- Signal control commands (E)
- Traffic sensor control (E)
- Video surveillance control (E)

St. Petersburg will also install DMS in the downtown district to offer another form of traffic information to residents and visitors. The following diagrams St. Petersburg Traffic Information Dissemination system.

St. Petersburg Traffic Information Dissemination System
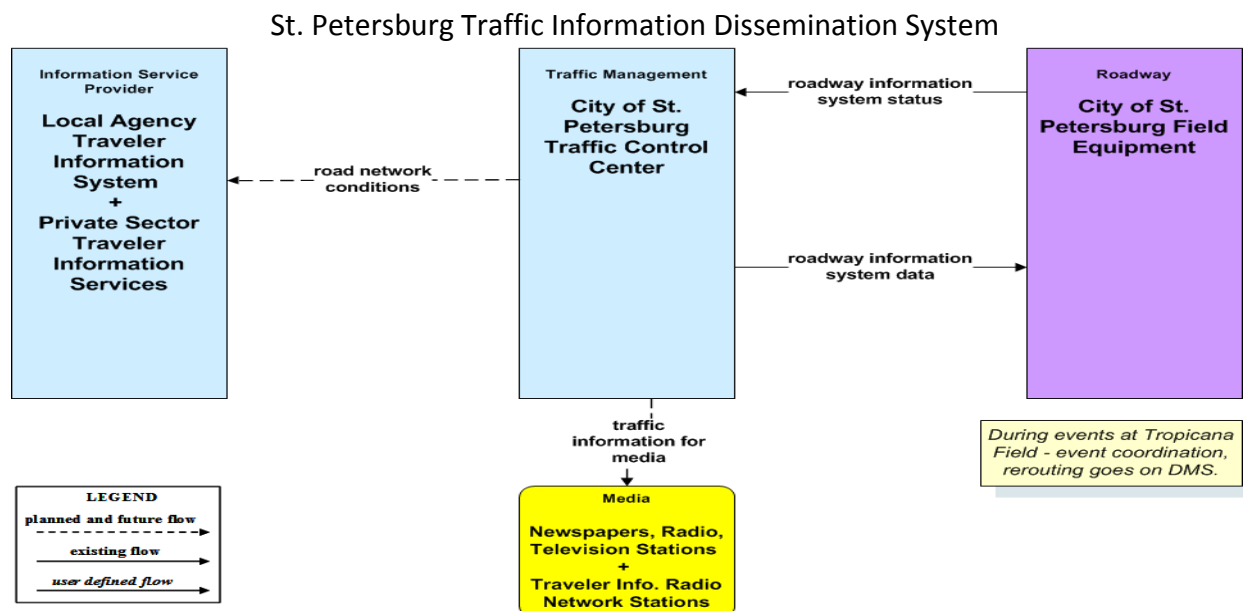
Vision Element #5: User-Focused Mobility Services and Choices

St. Petersburg's has a three point plan for providing real-time traffic, transit, parking, and other transportation-related information to travelers. First, the City plans to develop a Parking and Event Management System in the Downtown area using connected vehicle technology, DMS signage, CCTV cameras and in-vehicle information systems. Second, the City envisions creating a citywide "wi-fi" grid technology. The Wi-Fi technology will allow for "connected" infrastructure communications that will be able to relay information to the City's Traffic Center on traffic congestion and allow for optimization and redirection of traffic flow. Future phases will connect Wi-Fi technology to other smart infrastructure (public works) for overall efficiency in management of City assets. Finally, the City is developing a bike share system previously referenced, which will provide users real time feedback on bike availability.

Vision Element #7: Strategic Business Models and Partnering Opportunities

The City's private sector partner for this Smart City project is Echelon LLC. Echelon envisions investing in CPT aerial gondolas to support two major initiatives: 1) the transport of people in a most efficient manner that avoids traffic congestion at ground surface; and 2) as an economic development and tourist attraction for both tourists and residents of the St, Petersburg community. The City is actively exploring partnership opportunities with entities.

Vision #8 Smart Grid: Roadway Electrification, and Electric Vehicles

The City of St. Petersburg envisions deploying automated, on-demand LSVs or smart cars within the downtown area. The concept of the automated vehicles is to eliminate the use of the Park Once Shuttle. The City envisions that the automated vehicles will use battery power, however, we are in the process of identifying a partner to best evaluate the most impactful type of automated deployment.

Vision Element #9: Connected and Involved Citizens

The City of St. Petersburg is a national leader in information sharing with the public. The City has already made significant investments in mobile applications that enable citizens to connect online with numerous City databases. Refer to section 3 for an overview of the City's existing mobile platforms.

As previously mentioned in section 1, St. Petersburg has been an active partner on a regional level, supporting the Greenlight Pinellas Plan. This plan which included bus, passenger rail, regional connections, community access, and transit supportive development concepts is designed to meet the transportation needs of the community and to contribute positively toward Pinellas County's future growth by helping to attract and create new jobs and by creating more vibrant, sustainable communities where people can walk, bike, or take transit to a variety of destinations. During a series of Community Design Charrettes, residents and business owners developed a vision for what station areas in their community could look like, how they could fit into the surrounding neighborhood, and how people could use the stations. In total the Greenlight Pinellas Plan held approximately 500 meetings which attracted 90,000 residents to meetings over the four year planning period.

Vision Element #10: Architecture and Standards

As mentioned in Vision Element #4, the City is an active participant in the Tampa Bay Regional ITS Architecture. The City will work with all Tampa Bay Regional ITS partners to ensure new integrated technology proposed under the Smart City challenge will be brought on line in compliance with all rules, documentation and standards. Refer to section 8 for more on our existing ITS capabilities.

Vision Element #12: Smart Land Use

The City's Comprehensive Plan's TOD Goals directly align with the centerpiece of our Smart City project, the CPT. St. Petersburg TOD goal is to: "Create well-designed, TOD to allow residents, visitors and tourists to travel to a variety of places without using a personal vehicle, and to provide direction for developing and redeveloping properties around transit (gondola) stations in a way that makes it convenient for people to use". Principles that will guide the City in the planning, design and development of TOD include, but are not limited to: recognizing that each (gondola) station area is different, located within its own unique context and serves a defined purpose in the context of the transit corridor and the regional transit system; recognize the need for jurisdictions to work together toward common goals and commit to mutually beneficial partnerships; create walkable, moderate to high density, mixed use developments located within approximately ½ mile of the (gondola) station to support ridership; promote a variety of housing types for a wide range of ages and incomes within (gondola) station areas; make pedestrian and other alternative modes of transportation, including, but not limited to, bicycle transportation, and bus transit the focus of the (gondola) TOD development strategy without excluding automobiles; accommodate local and regional multimodal connections for multiple types of transportation, including, but not limited to buses, bicycles, cars, ships, boats, aircraft and taxicabs, and alternative modes of transportation; use urban design to create a sense of place and to enhance the community identity of (gondola) station areas and to make them attractive, safe, accessible and convenient places; incorporate sustainable technologies, where technologically and economically feasible, in (gondola) station design and operations, such as in lighting, signage, audio/visual, cooling, waste management and stormwater systems; implement (gondola) TOD development strategies as a means to improve air quality and contribute to improved health benefits through reduction of vehicular air pollution emissions and increased pedestrian and cycling opportunities; and implement (gondola) TOD development strategies to promote energy efficient land use patterns, to reduce greenhouse gas emissions, and to preserve or improve energy conservation features, such as an existing mature tree canopy and native landscaping.
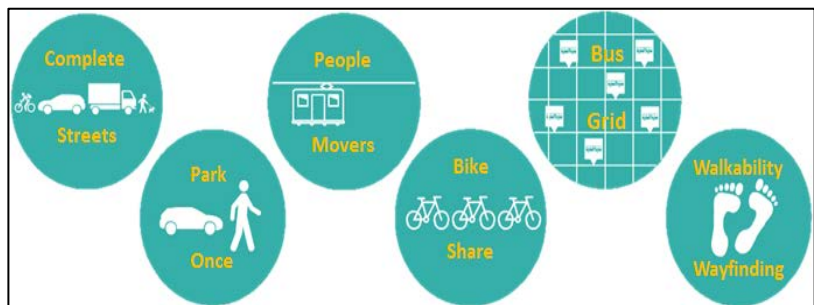
6. Risk Analysis and Mitigation

Technical

There are some risks from a technical standpoint associated with the components contemplated as a part of St. Petersburg's Smart City project. The CPT is a proven technology based on successful implementations in Europe and South America, though it has not been implemented in the United States in order to verify its ability in a different climate with a different populous. St. Petersburg is home to many international visitors, therefore it is anticipated that with an educated public, and technological modifications, the CPT should provide an effective form of urban transportation that's integrated with the full range of mobility options in St. Petersburg. Other Smart City components include more leading edge technologies which carry additional risks with unproven component features or combinations of component features. Though, as demonstrated in St. Petersburg's overall City Vision, the City prides itself on remaining an innovative community and is confident with the breadth of local, experienced hi-tech firms, that partnerships will be established to surmount any unforeseeable technical challenges.

Policy

There are some risks associated with established policies that could impact St. Petersburg's Smart City project, particularly with regard to the street-lighting "wi-fi" and automated low-speed vehicles as they relate to technologies currently regulated by the State of Florida. And while Florida law doesn't currently prohibit municipal broadband, it does require that a special tax is imposed on municipal telecommunications service and establishes a profitability requirement that makes it difficult to approve capital-intensive communications projects. And work is underway by the Florida legislature at this time to adopt language related to ride sharing services, though it is not anticipated to consider automated or autonomous vehicles at this time. To mitigate those risks, the City will work with the Pinellas County Legislative Delegation to advance regulatory changes and policy decisions that better accommodate St. Petersburg's Smart City Challenge project components.

Institutional

A key Institutional risk to St. Petersburg's Smart City Challenge projects includes the amount of funds currently programmed toward implementation of the project components. The capital outlay to design and construct premium transit services represents a significant investment for an agency, especially a city the size of St. Petersburg. However, research has shown that CPT systems are likely to be able to be implemented at a much lower cost, as much as 75% less than other fixed guideway systems including light rail technology. It is anticipated that implementation of St. Petersburg's Smart City Challenge components will require more than the anticipated $40M award by the Department of Transportation. The City of St. Petersburg will work to partner with community business leaders to seek financing partners to accomplish the various Smart City project components. By leveraging the significant investment by the

Department, the City will be able to fully implement the project components throughout St. Petersburg, including the South St. Petersburg CRA.

7. Potential Project Partners and Stakeholders

The City of St. Petersburg envisions partnering with governmental, non-profit and private sector organizations in order to successful execute our Smart City Challenge project. The City's primary partner for the project is:

Echelon LLC

Echelon LLC, based in St. Petersburg, Florida, is a privately owned real estate company involved in the development, ownership and management of multi-family residential, commercial office, ancillary retail, hospitality and mixed-use real estate properties for its own portfolio and for clients. Echelon's predecessor was established in 1987, and has developed and managed millions of square feet of commercial office, industrial, waterfront and warehouse space as well as over 30 upscale multi-family properties throughout the southeast and southwest United States. Echelon has been researching CPT for several years with the goal of implementing CPT, perhaps as a public-private partnership. Echelon also has experience and capacity to raise capital to implement multi-million dollar projects. As a partner to the Smart City Challenge, Echelon will assist in advancing the technology and programmatic elements associated with the CPT. It will also work with the City of St. Petersburg to ensure smooth integration of CPT with the remaining Smart City project components.

Pinellas Suncoast Transit Authority (PSTA)

PSTA is the public transit provider in Pinellas County, Florida. As previously mentioned, with the failure of the Greenlight Pinellas Plan, PSTA has a vested interest in finding ways to improve transit in its service area. With limited operating budgets and forecasted route cuts, the installation of CPT could allow PSTA to reexamine its route structure. As a partner to the Smart City Challenge, PSTA will collaborate with the City of St. Petersburg to ensure that the Smart City project components are aligned with PSTA's transit development plans with a special emphasis on integration with premium transit and transportation disadvantaged programs. PSTA will serve as the coordination agency for receipt of any FTA funds associated with the Smart City Challenge implementation.

Pinellas County Metropolitan Planning Organization/Pinellas Planning Council (MPO/PPC)

In 2015, land use and transportation policy in Pinellas County took a major step forward with the approval to unify the Pinellas Planning Council with the Pinellas County Metropolitan Organization. The Council is responsible for guiding land use planning decisions and is now a jointly operated decision-making agency with the Pinellas County Metropolitan Organization with dual membership for cohesive planning decision-making. The Pinellas County MPO/PPC is the countywide body that is tasked to develop plans, policies and priorities that guide local decision making on transportation issues. Principal

responsibilities include the development of a 20-year Long Range Transportation Plan (LRTP), a 5-year Transportation Improvement Program (TIP) a 2-year Unified Planning Work Program and related transportation planning studies and projects. The MPO seeks to improve transportation in Pinellas County for all principal modes of travel by prioritizing capital improvements to address the County's travel needs and allocating federal funding to implement the projects as identified in the TIP and the LRTP. As a partner to the Smart City Challenge, the Pinellas County MPO/PPC will collaborate with the City to ensure that the Smart City project components are aligned with the overall land use and transportation plans of Pinellas County and provide regional coordination.

Pinellas County Public Works

Pinellas County's Public Works builds on St. Petersburg's desire to build and maintain quality roads and bridges, improved traffic management, quality surface water, better flood control and aggressive mosquito control. From road repair to park construction to traffic control, the team strives to be responsive to citizens and work with them to provide services, maintain infrastructure and develop projects for unincorporated Pinellas County. As a partner, Pinellas County will collaborate with the City to ensure that the Smart City project components are aligned with the County and State's ITS Architecture and Standards.

St. Petersburg Chamber

The St. Petersburg Area Chamber of Commerce leads efforts to start new business and expand those already located in St. Petersburg. As a partner, the St. Petersburg Area Chamber of Commerce will collaborate with the City to ensure that the Smart City project components, and opportunities to contribute to the various projects, are well-communicated with the business community.

Skyway Marina District

The Skyway Marina District Plan is the result of the southern St. Petersburg community and City's desire to establish a destination district is southern St. Petersburg. The Skyway Marina District was officially born in October 2013 when the area was named. As a partner, the Skyway Marina District will collaborate with the City to ensure that the Smart City project components are implemented according to the Skyway Marina District Plan with guidance as appropriate from the District members.

8. Existing Transportation Infrastructure and System

Arterial Miles

St. Petersburg's roadway network is laid out as a traditional street grid network. The dense collection of streets includes many local and collector roads (110 miles) with arterial roadways (135 miles) that are spaced nearly a half-mile apart. Sidewalks are generally completed on at least one side of each collector and arterial road, with some local roads having sidewalks.

The City's roadway network will receive an extensive review in 2016 with the development of St. Petersburg's first Complete Streets Implementation Plan. In November 2015, Mayor

Kriseman enacted the City's first Complete Streets policy that was subsequently endorsed by the St. Petersburg City Council. The intent of St. Petersburg's Complete Streets is to develop a network that emphasizes modal priorities along parallel corridors while emphasizing the connection between land use and desired, supportive transportation. The Implementation Plan will require the City to review all roadway design standards to be sure that they recognize best practices for urban form, and also provide for an update to the bicycle and pedestrian master plan.

Freeway Miles

In addition to the dense urban grid of local, collector, and arterial roads, the City has 25 miles of limited access highways and freeways. Interstate I-275 generally runs the entire length of the City. At peak times during the day, congestion on I-275 becomes prohibitive to free-flow movements. A Project Development & Environment (PD&E) study for I-275 in St. Petersburg is currently underway by the FDOT. Preliminary findings indicate that limited widening to provide better lane continuity will be necessary to improve traffic operations on I-275 through the bulk of St. Petersburg. At the City's north end, the FDOT study has found that the institution of managed, express tolled lanes will be beneficial to the system operations. This segment of I-275 will become part of the Tampa Bay Express to connect with planned regional connections to Tampa. However, it is expected that I-275 will continue to have severe congestion until vehicle trips are reduced.

Transit Services

As previously described in section 3, public transit in the City is delivered through PSTA. With only 11 routes operating primarily in the City, residents have limited transportation options and are faced with headway times of 20 minutes and upwards. In an attempt to improve public transit access to our residents, the City provides the free ParkOnce shuttle. The St. Petersburg Downtown Partnership also provides transit service with the Looper Trolley, though its route is largely aimed at visitors and not local residents.

Shared-use Mobility Services

Section 3 describes some of the shared-use mobility services that are available in the City of St. Petersburg. In addition to vehicle shared-use services, the City has invested resources into expanding its pedestrian and bicycle network. Since 2003, the City has been working to implement the award-winning City Trails Bicycle and Pedestrian Master Plan. The plan resulted in the development of a network of bicycle pedestrian facilities with more than 112 miles of shared use trails and bike lanes.

Information and Communication Technology (ITC), Intelligent Transportation System (ITS), and Smart Grid Infrastructure

In 2004, Pinellas County surveyed residents on multiple transportation issues as part of the County's Comprehensive Plan Evaluation and Appraisal process. Nearly 70 percent of respondents indicated the need for coordinated signal timing and other methods to improve traffic congestion. As a result in 2007 the County has been using technology to improve

transportation management. Using both wired and wireless devices, the Public Works Department can monitor current traffic patterns, allowing them to manage traffic flows, minimize congestion, communicate with travelers and improve pedestrian and vehicular safety, all from its Traffic Control Center.

At major intersections throughout Pinellas County, closed circuit cameras mounted on poles record traffic flow, providing live video feed via fiber-optic networks to Control Center staff. If there is an accident or a major backup, staff can communicate to motorists through overhead message boards, displaying custom messages to alert drivers and provide alternative route options.

The County also uses an interconnected computerized signal system which can monitor variations in traffic flow and adjust signalizing to respond. During rush hour and other peak travel times, the system can automatically synchronize signals at multiple intersections to keep lights along heavily traveled corridors green for longer times, thereby reducing congestion. If needed, staff at the Control Center can also manage traffic light synchronization.

Pinellas County has prioritized when and where to install ITS technologies at intersections and along arterial roads, splitting installation into three phases; Phase 1 finished in 2009, with the third and final phase expected to be completed in 2018.

The City of St. Petersburg has its own traffic control center and uses the feeds from both the County and FDOT to visually identify incidents. The Traffic Center will also use the feeds to modify traffic signals to relieve congestion and/or to update messaging on DMS structures.

9. Data Collection

Current Data Collection

The table below lists the current inventory of GIS data collected by the City of St. Petersburg. Many of the GIS layers are used to populate Google based maps that are available to the public on the City's webpage. The City now maintains its data using ESRI software in large part so that it can easily share data with Pinellas County, amongst other partner agencies.

Dataset	Feature Class Alias
Administrative Data	This dataset contains municipal, school and other related administrative or jurisdictional boundaries. Data collected includes: 1) Administrative Area Boundary Lines; 2) Annexation History; and Municipal Boundaries.
Community Services	This is an added feature dataset that contains data related to Community Services Dept. Data collected includes: 1) Neighborhood Associations; 2) the lack of Neighborhood Associations; and 3) Neighborhood Association overlaps.
Demography	This dataset contains a collection of features used to report information about human geography. Data includes: 1) Census Blocks; and 2) Census Tracts.
Election Administration	This dataset contains a collection of features used to administer elections and publish elected representatives. Data collected includes: 1) City Council Districts; 2) Polling Places; and 3) Voting Precincts.
Elevation	This dataset contains a collection of features that describe the physical terrain. Data collected includes: 1) one foot contours; and 2) two foot contours.

Dataset	Feature Class Alias
Emergency Planning	This dataset contains a collection of features used in emergency planning and recovery. Data collected includes: 1) Debris Removal Sites; 2) Emergency Shelters; 3) Emergency Operations Sub-centers; 4) Evacuation Areas; 5) Evacuation Routes; 6) Re-entry Recovery Routes; 7) FHWA Roads; 8) EOC Road Maintenance; and 10) Traffic Control Points.
Facilities Streets	This dataset contains a collection of features used to gather information about facilities, parks, streets, signs and other assets. Data collected includes: 1) Bridge Points; 2) Curb Ramps; 3) Encumbrance Lines; 4) Pavement Edges; 5) Railroads; 6) Sidewalks; 7) Streets City Maintained; 8) Alleys City Maintained; and 9) Streets Ancillary.
Infrastructure Operations	This dataset contains a collection of features used to capture public infrastructure operations information. Data collected includes: 1) Atlas Grid; 2) Business Tax Investigator Areas; 3) Public Service Representative Zones; and 4) Utility Account Cycles.
Land Use Planning	This dataset contains a collection of features used to inventory land use patterns. Data collected includes: 1) Community Residential Homes; 2) FEMA Flood Zones; 3) Proposed Land Use; 4) Local Landmarks; 5) Preservation Areas; and 6) Zoning Districts.
Law Enforcement Operations	This dataset contains a collection of features used by law enforcement professionals to protect life, property, and promote public safety. Data collected includes: Community Policing Areas; 2) Crime Tracts; 3) Crime Tract Zones; 4) Fishing Boundaries; 5) Police Districts; 6) Police Resource Centers; and 6) Police Sectors.
Parcel Publishing	A collection of features that represent a published version of parcel information. These features are extracted from the parcel editing environment, simplified and merged with other attributes for analysis and reporting. Data collected includes tax parcels.
Parks Operations	This is an added feature dataset that contains data related to Parks Dept. Data collected includes: 1) Park and Recreation Areas; 2) Park Maintenance Areas; 3) Park Maintenance Districts; and 4) Park Polygons.
Pinellas Co Property Appraiser Data	This dataset contains data imported from the Pinellas County Property Appraiser and is processed to create other feature classes such as Tax Parcels. Data collected includes: 1) Parcels PCPAO; 2) PAO Information Points; and 3) Parcels PCPAO lines.
Planning Economic Development	This is an added feature dataset that contains data related to Planning and Economic Development Dept. Data collected includes: 1) Business Districts; 2) Commercial Corridors; 3) Community Redevelopment Areas; 4) Development of Regional Impact Areas; 5) Downtown Retail Trade Area; 6) Florida Enterprise Zone; 7) HUB Zones; 8) Joint Development Multiple Use Lots; 9) Main Streets; 10) Midtown; 11) Redevelopment Corridors; and 12) Urban Job Tax Credit Area.
Reference Data	This dataset contains a collection of features that provide geographic context in a community. Data collected includes: 1) Facility Site Points; 2) Fire Stations; 3) Hospitals; 4) Libraries; 5) Post Offices; 6) Road Centerlines; and 7) Schools.
Transportation Planning	This is an added feature dataset that contains data related to Transportation Planning Dept. Data collected includes: 1) Canoe and Kayak points and trails; 2) School Boundaries; 3) Trails; and 4) Truck Routes.
Waterbody	This is an added feature dataset that contains Water Body information maintained by Engineering Dept. Data collected includes: 1) Channel Markers; 2) Waterbodies; and 3) Waterlines.
Water Distribution	This dataset contains a collection of features that represent the water distribution network in a community. Data collected includes service points.

The City of St. Petersburg intends to continue to collect the GIS data as indicated above. In addition to the data listed above, data necessary to fulfill the requirements of section 11 will be collected in order to measure the success of St. Petersburg's Smart City Vision. Data collected will be shared with all project stakeholders and made available to the public as necessary to continue to engage residents and visitors in a meaningful way. It should be noted that some public safety information may need to remain protected; with access privileges ascertained and granted accordingly, so as not to allow for inappropriate use of the data. Unless necessary to maintain public safety, the City is willing make data collected as a part of the Smart City Challenge available to other agencies that may be faced with similar challenges as St. Petersburg.

St. Petersburg will be developing a new set of metrics from which to measure the success of the City's roadway this year as a part of the Complete Streets Policy that Mayor Kriseman signed in 2015 (see section 8). The metrics will be developed as a part of the upcoming Complete Streets Implementation Plan and are likely to include such criteria as bicycling level of traffic stress and transportation connectivity indices (both geographic connectivity and modal connectivity).

In keeping with the St. Petersburg's Vision, the City would like to pursue additional opportunities to crowd-source data collection through the use of mobile apps. The City would collaborate with Pinellas County on its concepts to collect data through Bluetooth/BlueTOAD technology as well. Opportunities for expanded crowd-sourcing of data will only improve as additional Smart City project components brought online.

10. Existing Standards, Architectures, Certifications for Intelligent Transportation Systems and Connected Vehicle Base Technologies

The City of St. Petersburg participated in the development of a regional ITS architecture with the Florida Department of Transportation District 7. The following are the roles and responsibilities, by functional area or by project, for City of St. Petersburg:

Functional Area or Project	Roles and Responsibilities	Status
Incident Management (Traffic and Maintenance) for West Central Florida Regional ITS Architecture - FDOT District 7	Provide maintenance resources in response to incidents on municipally operated arterials. Provide incident information to travelers using traffic information devices, such as DMS devices, on municipally owned roadways, and through local ISPs and Web sites. Provide incident information to other traffic management and public safety agencies. Perform network surveillance for detection and	Existing

	verification of incidents, and send traffic/incident information and traffic images to local and County public safety agencies and EOCs. Coordinate incident response for incidents on or adjacent to County-owned roadways with PWDs, public safety agencies, and EOCs in surrounding counties and municipalities, including scheduled event responses. Adjust signal-timing patterns in response to incidents.	
	Coordinate maintenance resource response to incidents in the municipality with local public safety agencies.	Planned
Information Dissemination for West Central Florida Regional ITS Architecture - FDOT District 7	Receive AMBER Alerts and other wide area alert information from the County EOC/warning points. Provide traffic information to travelers using municipal public information systems, private companies, FL511, and the media. Provide traffic information to travelers using municipal DMS devices. Provide traffic information in a coordination effort to the FDOT statewide C2C information network. Coordinate evacuation and reentry plans with the County EOC/warning points and local EOCs. Coordinate emergency plans, incident responses, and resources with the County EOC/warning points and local EOCs.	Existing
	Provide traffic and road network information to local transit agencies.	Planned
St. Petersburg DMS Roles and Responsibilities	Provide traffic information to travelers using municipal DMS devices.	Existing
Traffic Signal Control for West Central Florida Regional ITS Architecture - FDOT District 7	Provide transit signal priority with roadside devices for PSTA transit vehicles. Provide interconnection between railroad equipment and traffic signal systems to update signal timing when HRIs are blocked by trains. Operate traffic signal systems on municipal-owned arterials. Obtain traffic images and traffic flow data from City of St. Petersburg CCTVs and field sensors, and maintain operational control of all field equipment. Coordinate traffic information with FDOT District 7, adjoining cities, and Pinellas County. Coordinate emergency traffic signal control with the County EOC/warning points.	Existing
	Provide parking demand information to private/public parking facilities to determine parking capacity and traffic implications at facilities. Provide emergency signal preemption for local fire/EMS agencies.	Planned
Traveler Information for West Central Florida Regional ITS Architecture - FDOT District 7	Provide maintenance and construction information to the traveling public using roadside equipment, such as DMS devices and HAR broadcasts, and traveler information systems. Coordinate and share traveler information with all other traveler information providers in the region. Collect traffic and incident information, and provide it to the media and private travelers.	Existing

11. Project Goals and Outcomes

St. Petersburg's goals for the Smart City Challenge are ambitious. Through implementation of the Smart City initiative proposed in this document, we will be able to demonstrate how physical infrastructure improvements (CPT), Automated, On-Demand Low-Speed Vehicles/ Smart Cars), advanced data and ITS technologies and applications can be used to fulfill the following goals and related objectives:

- **Reduce Congestion**
  o Reduce Average Travel Time (in minutes)

- o Increase Travel Time Reliability (reduce the average daily differential between normal and peak travel times)
  - o Increase the percent of residents who commute using alternate forms of transportation
  - o Increase citizen satisfaction with the flow of traffic
  - o Reduce the percent of lane miles at Level of Service D and below
- **Improve Traveler Safety**
  - o Reduce accidents per million vehicle miles traveled
  - o Reduce accident severity (number of injuries, fatalities, cost)
- **Environmental Improvements**
  - o Reduce fuel consumption
  - o Reduce GHG emissions
  - o Percent of days the Air Quality Index Exceeds 100
  - o Reduce to Ratio of Vehicle Trips to Person Trips
- **Connect Underserved Transportation Communities**
  - o Increase percentage of communities within close proximity to transit services through expansion of Smart Growth land use development
  - o Reduce number of trips requiring transfers
  - o Increase percentage of communities within close proximity of continuous walkways or bike trails, Resort Area, Activity Centers, hospitals, shopping or dining areas.
  - o Reduce average wait time for transit or requested mobility service
- **Support Economic Vitality**
  - o Reduce transportation costs as percent of household income
  - o Increase population in areas within walking distance to business, shopping and entertainment
  - o Provide opportunities to create businesses that develop or implement transportation technologies which support greater personal mobility
  - o Reduce distances between home and work for local residents
  - o Reduce travel times between home and work for local residents.

The City of St. Petersburg has joined STAR Communities and is using the STAR Communities Rating System to develop a city baseline and to set goals from which to measure efforts toward sustainability. These metrics will be supplementary and complementary to those listed elsewhere in this section.

The methodology to assess the potential impacts of the Smart City project will use a combination of modeling and simulation techniques that have been approved by US DOT under the TIGER program. Data inputs into the modeling/simulation would include operations and transit use, user surveys, and collection of real-time data from sensors, vehicles, CPT, and other sources that would allow comparison of data in support of the above objectives. Such data would be made available, as necessary, to any independent evaluators used by USDOT to review the work developed under this Smart City project.

12. Capacity

St. Petersburg has established a broad-based City team to implement the components of the Smart City Challenge. Led by the City Development Administration, staff from the Transportation and Parking Management Department along with the Planning and Economic Development will focus on the implementation of the project vision and its integration with other City initiatives. The team also includes St. Petersburg's Public Works Administration, encompassing Engineering and Capital Improvements and Stormwater, Pavement and Traffic Operations Department, to be sure that the added infrastructure is fully incorporated as a part of a smart network of City assets. Finally, the team includes the Department of Technology Services, Urban Affairs Department, and the Office of Sustainability. The City anticipates that participation will likely be required by the City Attorney, its legislative liaison, small business liaison, and others, as the course of project implementation ensues. The teams outlined have a strong history of working together to complete major capital projects throughout the City. Below is a short list of projects our teams have successfully executed:

Capital Project	Estimated Project Budget	Anticipated Project Completion
New St. Petersburg Pier	$50M	2018
Pier Approach – Pier District – DWMP Phase I	$20M	2018
New Police Headquarters	$70M	2018
Biosolids Waste to Energy Plant	$57M	2019

The City Administration remains fully committed to bringing all staffing resources to bear on this exciting opportunity for transformative change in St. Petersburg.

13. Leveraging Resources

The City is directly supporting this Smart City Challenge grant through funding a variety of infrastructure platforms including development of a Parking and Event Management System in the Downtown area using connected vehicle information, DMS signage, CCTV cameras and in-vehicle information systems. This system technology is an outgrowth of the City's Parking Demand Study and the County's ITS program. It will benefit drivers by reducing traffic and pollution related to parking space search time, and we will leverage this technology with the planned Downtown ITS project (County and State funds of $3.6M) in FY18.

In addition to the $3.6M ITS City investment in this grant project, the City is leveraging $16.5M in federal, state and local funds to design and implement the Central Avenue BRT project. This past December FDOT announced a $500,000 grant award to PSTA for the final design of the Central Avenue BRT project from downtown St. Petersburg to the Gulf beaches. The Central Avenue BRT will complement local service provided by the existing and highly successful Central Avenue Trolley by providing expedited, limited stop travel from downtown St. Petersburg to the beaches serving tourists, employers, and residents. The Central Avenue Corridor is the single highest transit corridor in the Tampa Bay region. The BRT project will be collocated with at least one of the CPT corridors.

Further, we welcome Mobileye's proposal to provide to the winning Smart City candidate a $10 million collision avoidance system. Upon an award to the City of St. Petersburg, such a system would be installed in PSTA busses. As part of PSTA's $16M Central Avenue BRT project ($8M FTA, $4M FDOT, $4M PSTA), the City will work with PSTA to include smart systems technologies; connected vehicles, onboard tracking, and a Wi-Fi integrated fare system. As such, the Mobileye technologies could be included in these BRTs and remain on the system in the coming years.

Last but not least, the City is actively engaged with our local business community on a multitude of partnerships and economic development projects that are further described in the State of the Economy report.